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PATENTED DEC. 17, 1907.

E. BLACKFORD.  
REVOLVING PADDLE CHURN.  
APPLICATION FILED APR. 27, 1907.

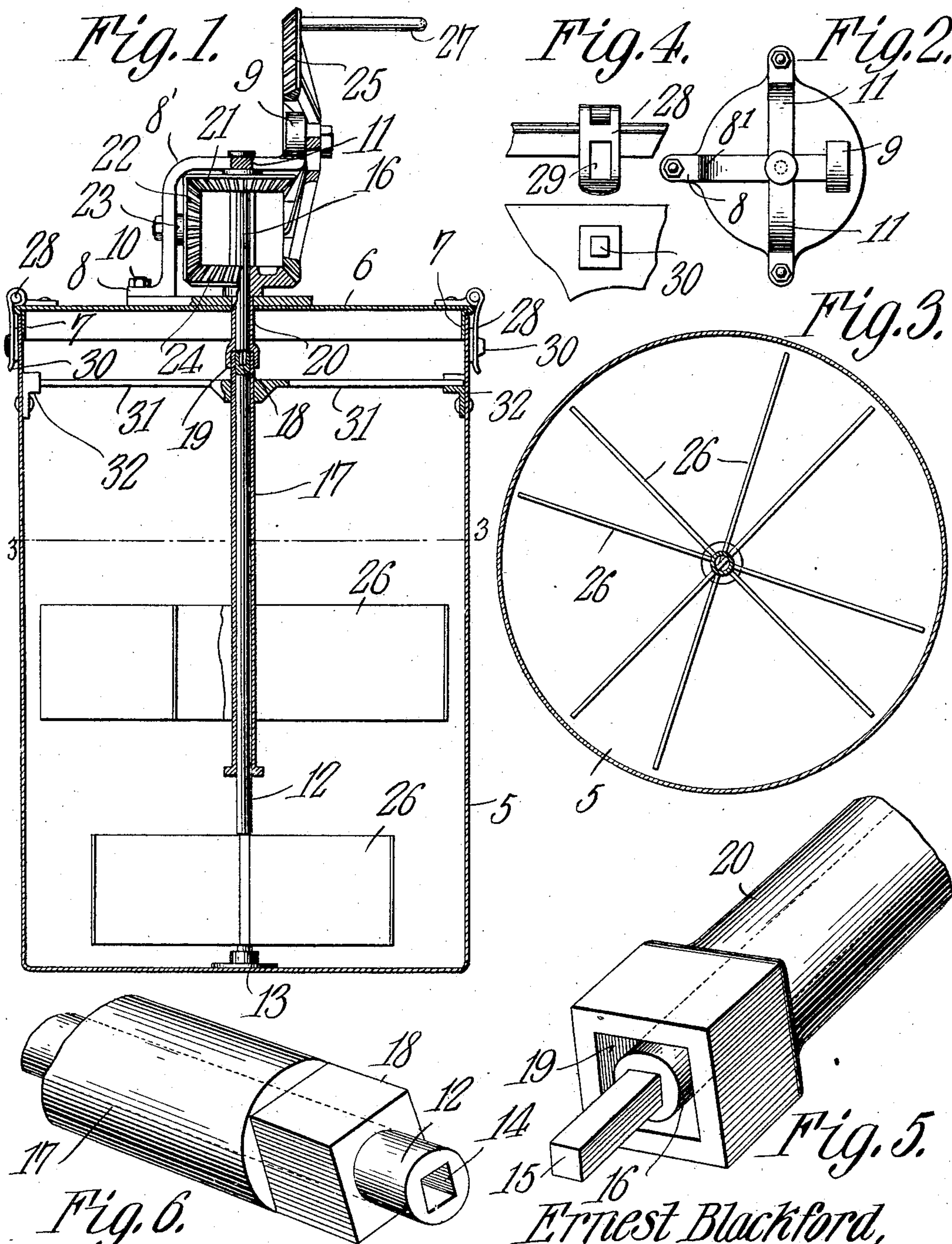


Fig. 6.

WITNESSES:

*E. H. Hunt*  
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Fig. 5.

*Ernest Blackford,*

INVENTOR.

By

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ATTORNEYS



# UNITED STATES PATENT OFFICE.

ERNEST BLACKFORD, OF POTOMAC, ILLINOIS

## REVOLVING-PADDLE CHURN.

No. 874,292.

Specification of Letters Patent.

Patented Dec. 17, 1907.

Application filed April 27, 1907. Serial No. 370,666.

*To all whom it may concern:*

Be it known that I, ERNEST BLACKFORD, a citizen of the United States, residing at Potomac, in the county of Vermilion and State of Illinois, have invented a new and useful Revolving-Paddle Churn, of which the following is a specification.

This invention relates to churns and has for its object to provide a comparatively simple and inexpensive device of this character in which the dashers are mounted on telescopic shafts and arranged to rotate in opposite directions.

A further object of the invention is to provide means for connecting the dasher-carrying shafts with the operating means.

A still further object of the invention is to generally improve this class of devices so as to increase their utility, durability and efficiency as well as to reduce the cost of manufacture.

Further objects and advantages will appear in the following description, it being understood that various changes in form, proportions and minor details of construction may be resorted to within the scope of the appended claims.

In the accompanying drawings forming a part of this specification: Figure 1 is a longitudinal sectional view of a churn constructed in accordance with my invention. Fig. 2 is a top plan view of the supporting bracket. Fig. 3 is a transverse sectional view taken on the line 3—3 of Fig. 1. Fig. 4 is a front elevation of the catch for holding the cover in closed position. Fig. 5 is a perspective view of the socket carrying member. Fig. 6 is a similar view of the squared end of the adjacent member.

Similar numerals of reference indicate corresponding parts in all of the figures of the drawings.

The improved device forming the subject matter of the present invention includes a receptacle or body portion 5 preferably cylindrical in shape, and formed of metal, wood, porcelain or other suitable material, said receptacle being provided with a removable cover 6 having a depending flange 7 for engagement with the interior walls of the receptacle, as shown.

Mounted on the cover 6 is a supporting bracket having its intermediate portion curved laterally at 8' and its opposite ends bent to form laterally extending lugs 8' and 9 one of which is secured to the top of the

churn in any suitable manner as by screws or similar fastening devices 10. Secured to and preferably formed integral with the supporting bracket are laterally extending arms 60 11 the ends of which are bent to form lugs similar in construction to the lugs 8 and designed for attachment to the cover 6. Arranged within the receptacle 5 is a vertically disposed shaft 12 having its lower end journaled in a step bearing 13 secured to the bottom of the receptacle and its upper end provided with a squared recess or socket 14 for the reception of the reduced extension 15 of a short shaft section 16. Surrounding the shaft 12 and loosely mounted for rotation thereon is a hollow shaft 17, the lower end of which terminates short of the bottom of the receptacle while the upper end thereof is provided with a squared shoulder 18 adapted 75 to engage a correspondingly shaped socket 19 formed on the lower end of a short tubular member 20. The shaft section 16 extends through an opening in the supporting bracket and is provided with a beveled gear 80 21 which meshes with an intermediate beveled gear 22 journaled on a stub shaft 23 extending laterally from the curved portion of the supporting bracket, as shown. The intermediate gear 22 meshes with a beveled 85 gear 24 secured to and preferably formed integral with the tubular member 20. The beveled gear 24 meshes with a master gear 25 journaled on the laterally extending lug 9. Secured to and extending laterally from the shafts 12 and 17 are a plurality of radially disposed paddles or dasher blades 26 which 90 revolve in opposite directions and serve to churn or agitate the liquid in the receptacle 5 when the master gear is rotated. It will thus be seen that by rotating the handle 27 motion will be imparted to the master gear 25 and through the medium of the beveled gears rotate the paddles or dashers in opposite directions. Pivotaly mounted on the 100 cover 6 are locking members 28 having their free ends formed with recesses 29 adapted to receive suitable ears 30 extending laterally from the exterior walls of the receptacle thereby to lock the cover in closed position. 105 As a means for centering the operating shaft with respect to the interior walls of the receptacle there is provided a transverse bar 31 the opposite ends of which are seated in notches or recesses formed in brackets or supports 32 secured to the adjacent walls of the receptacle, as shown. It will thus be 110



seen that by releasing the locking members 29 and elevating the cover 6 the shaft sections 16 and 20 may be disconnected from the shafts 12 and 17 so that the dashers may be readily removed from the body of the churn and thoroughly cleaned when desired.

In order to assemble the parts it is merely necessary to insert the squared shoulder 18 in the socket 19 and then introduce the extension 15 of the shaft section 16 in the adjacent socket or recess 14 when the operating shafts 12 and 17 will be operatively coupled with the operating mechanism, as will be readily understood.

From the foregoing description it will be seen that there is provided an extremely simple, inexpensive and efficient device admirably adapted for the attainment of the ends in view.

Having thus described the invention what is claimed is:

A churn including a receptacle having supporting lugs secured to the interior wall thereof, a bar extending transversely across the receptacle and engaging said lugs, a cover, a vertically disposed shaft arranged

within the receptacle and extending through the bar, a tubular shaft surrounding the vertically disposed shaft and also extending through the bar, dashers carried by the vertical and tubular shafts a supporting bracket secured to the cover, a shaft section journaled in the supporting bracket and operatively connected with the vertically disposed shaft, a tubular member surrounding the vertical shaft and operatively connected with the tubular shaft, beveled gears carried by the shaft section and tubular member respectively, an intermediate gear journaled on the bracket and meshing with the beveled gears, and a master gear mounted for rotation on the bracket and engaging one of the beveled gears, the opposite beveled gear being free to rotate independently of the master gear.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

ERNEST BLACKFORD.

Witnesses:

CHAS. MERCER,  
AMOS HOFF.